


NMDA and light damage in mice

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 An abbreviated version of this protocol was published in Science in Oct 2020

Gene regulatory networks controlling vertebrate retinal regeneration

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Detailed protocol

For NMDA treatment, adult mice at ~2 months of age, were anesthetized with isoflurane inhalation. A hole was poked using a 31G needle just under the limbus. Two microliters of 100mM NMDA in PBS were intravitreally injected using a syringe with a 33G blunt-ended needle.

For Light damage, the mice were reared in cyclic 12-hour low light/12-hour dark conditions at the University of Florida animal housing facility. Prior to light damage, mice were placed in a modified cage equipped with dimmable white light LED strips. Light intensity was measured using a light meter (Thermo Fisher Scientific Inc., Waltham, MA) and set to 2000 lux. Animals were subjected to the damaging light for 4 hours (6PM-10PM) and were moved back to low light conditions to recover. All animals were kept in ventilated racks for the duration of the experiment and the lighting equipment was approved by Animal Care Services

How to cite: (Readers should cite both the Bio-protocol preprint and the original research article where this protocol was used)

1. Hoang, T. (2022). NMDA and light damage in mice. Bio-protocol Preprint. bio-protocol.org/prep1540.
2. Hoang, T., Wang, J., Boyd, P., Wang, F., Santiago, C., Jiang, L., Yoo, S., Lahne, M., Todd, L. J., Jia, M., Saez, C., Keuthan, C., Palazzo, I., Squires, N., Campbell, W. A., Rajaii, F., Parayil, T., Trinh, V., Kim, D. W., Wang, G., Campbell, L. J., Ash, J., Fischer, A. J., Hyde, D. R., Qian, J. and Blackshaw, S. (2020). Gene regulatory networks controlling vertebrate retinal regeneration. Science. DOI: [10.1126/science.abb8598](https://doi.org/10.1126/science.abb8598)

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